

REMARKS/ARGUMENTS

Claims 1 – 3 and 7 – 23 are presented for reconsideration and further examination in view of the foregoing amendments and following remarks.

In the outstanding Office Action, the Examiner rejected claims 1 – 3 and 15 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,085,589 to Sands (hereinafter referred to as “the Sands ‘589 patent”) in view of U.S. Patent No. 5,806,832 to Larbuisson (hereinafter referred to as “the Larbuisson ‘832 patent”); rejected claims 1, 4 – 8 and 10 – 12 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,683,957 to Sands (hereinafter referred to as “the Sands ‘957 patent”) in view of the Larbuisson ‘832 patent; rejected claims 13 and 14 under 35 U.S.C. §103(a) as being unpatentable over the Sands ‘957 patent in view of the Larbuisson ‘832 patent and further in view of Applicant’s Admitted Prior Art; rejected claims 9 and 16 under 35 U.S.C. §103(a) as being unpatentable over the Sands ‘957 patent in view of the Larbuisson ‘832 patent and further in view of U.S. Patent No. 5,462,861 to Payton (hereinafter referred to as “the Payton ‘861 patent”); rejected claims 17 – 21 and 23 under 35 U.S.C. §103(a) as being unpatentable over the Sands ‘957 patent in view of the Payton ‘861 patent; and rejected claim 22 under 35 U.S.C. 103(a) as being unpatentable over the Sands ‘957 patent in view of the Payton ‘861 patent and further in view of Applicant’s Admitted Prior Art.

By this Response and Amendment,

claims 4 – 6 have been cancelled without prejudice or disclaimer;

independent claim 1 has been amended to recite the features of former claims 1, 4, 5 and 6 and to recite “said closing body (3) is comprised of at least two differently inclined or curved outer wall portions (5, 6, and 5’, 6’ respectively), said outer wall portions begin with a first outer wall portion (6 and 6’ respectively) and then with a second outer wall portion 5 and 5’ respectively), whereas the first outer wall portion defining an elliptically curved and the second outer wall portion defining a conical

path.” The last feature recited in amended claim 1, which is also recited in independent claims 17 and 23, was previously recited in claim 8; however, claim 8 recites differently inclined or curved outer wall portions have an elliptically curved path *or* conical path, whereas amended claim 1 recites an elliptically curved *and* conical path. Support for this amendment is found in originally filed figures 1 – 3 and 7 – 8; however, it should be clear that a frustoconical path, as shown in Fig. 7, is not compulsive. Applicant allocated the elliptically curved path to a first outer wall portion and the conical path to a second outer wall portion in order to clarify its location.

The language recited in claim 1, which was previously recited in claim 5, differs in that the interfering edge is disposed on the closing body on its outer diameter, which is effected by deleting “especially” from former claim 5.

Further, by this Response and Amendment, the claim rejections have been traversed.

It is respectfully submitted that the above amendments do not introduce any new matter to this application within the meaning of 35 U.S.C. §132.

Prior Art Rejections

The Examiner rejected claims 1 – 3 and 15 as being unpatentable over the Sands ‘589 patent in view of the Larbuisson ‘832 patent. The Examiner rejected claims 1, 4 – 8 and 10 – 12 as being unpatentable over the Sands ‘957 patent in view of the Larbuisson ‘832 patent. The Examiner rejected claims 13 and 14 as being unpatentable over the Sands ‘957 patent in view of the Larbuisson ‘832 patent and further in view of Applicant’s Admitted Prior Art. The Examiner rejected claims 9 and 16 as being unpatentable over the Sands ‘957 patent in view of the Larbuisson ‘832 patent and further in view of the Payton ‘861 patent. The Examiner rejected claims 17 – 21 and 23 as being unpatentable over the Sands ‘957 patent in view of the Payton ‘861 patent. The Examiner rejected claim 22 as being unpatentable

over the Sands '957 patent in view of the Payton '861 patent and further in view of Applicant's Admitted Prior Art.

Response

By this Response and Amendment, Applicant traverses the rejection since all of the features of the presently claimed invention are not disclosed, taught or suggested by the cited prior art combination. To establish a *prima facie* case of obviousness, the Examiner must establish: (1) some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

Amended claim 1 recites "said closing body (3) is comprised of at least two differently inclined or curved outer wall portions (5, 6, and 5', 6' respectively), said outer wall portions begin with a first outer wall portion (6 and 6' respectively) and then with a second outer wall portion 5 and 5' respectively), whereas the first outer wall portion defining an elliptically curved and the second outer wall portion defining a conical path."

The Sands '589 patent, the Larbuisson '832 patent, the Sands '957 patent, and the Payton '861 patent all disclose a safety valve using a closing body with a conical cross-section. That portion of Applicant's Admitted Prior Art that was cited by the Examiner in support of the obviousness rejection does not refer to the shape of a closing body.

With further respect to the Payton '861 patent, claim 1 is related to the embodiment in which the interfering means for generating a turbulent flow is located on the outer side of the closing body.

Embodiments having interfering means on the inner side of the housing are no longer part of the present application. Accordingly, the Payton '861 patent is not relevant.

With further respect to the Larbuisson '832 patent, the Larbuisson '832 patent refers to a quick coupler for coupling/uncoupling a female part with a male part. There is no closing body which is movable between an open and a closed position the coupled-together position. Thus, Larbuisson relates to a completely different technical field and is, therefore, not applicable to the presently claimed invention.

In contrast to the presently claimed invention, none of the cited prior art references, alone or in combination with each other discloses, teaches or suggests that a "closing body (3) is comprised of at least two differently inclined or curved outer wall portions (5, 6, and 5', 6' respectively), said outer wall portions begin with a first outer wall portion (6 and 6' respectively) and then with a second outer wall portion (5 and 5' respectively), whereas the first outer wall portion defining an elliptically curved and the second outer wall portion defining a conical path." All of the references disclose a closing body with a constantly conical cross-section.

Therefore, none of the references, alone or in combination with each other, renders the presently claimed invention obvious since they do not disclose, teach or suggest all of the features of the independent claims of the present application. Moreover, as dependent claims necessarily recite all of the features of the independent claims from which they depend, claims 2 – 3 and 7 – 16, which ultimately depend from independent claim 1, and claims 18 – 22, which ultimately depend from independent claim 17, are asserted to be allowable for at the same reasons as their respective independent claims. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the prior art rejections.

CONCLUSION

In light of the foregoing, Applicant submits that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicant petitions for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,
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